

# AMERICAN BEE JOURNAL

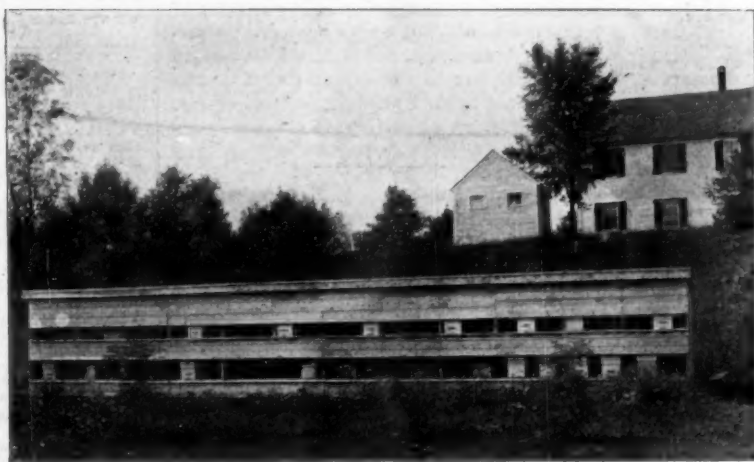


GEORGE W. YORK,  
Editor.

CHICAGO, ILL., MARCH 6, 1902.

FORTY-SECOND YEAR  
No. 10.

WEEKLY



BEE-HOUSE OF F. R. WEBSTER, OF CHESHIRE CO., N. H.—(See page 143.)

# THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

**GEORGE W. YORK & COMPANY**

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A. Getaz, and others.

## IMPORTANT NOTICES.

**The Subscription Price** of this Journal is \$1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

**The Wrapper-Label Date** of this paper indicates the end of the month to which your subscription is paid. For instance, "dec01" on your label shows that it is paid to the end of December, 1901.

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## National Bee-Keepers' Association

### OBJECTS:

- To promote and protect the interests of its members.
- To prevent the adulteration of honey.
- To prosecute dishonest honey-dealers.

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MEMBERSHIP DUES, \$1.00 a year.

If more convenient, Dues may be sent to the office of the American Bee Journal, when they will be forwarded to Mr. Secor, who will mail individual receipts.

**A Celluloid Queen-Button** is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

## Weekly Budget.

A BEE-KEEPING HOG is the title Editor Root gives the man who will locate himself upon territory already fully occupied by others. Ugh! Ugh!

EDITOR E. R. ROOT does not compare with his father as a hobby-rider. Still, he is something of an equestrian in that line. Just now the hobby he has mounted is that of pure air and plenty of it for bees in winter. Not a very unsafe hobby.

C. P. Dadant has had put upon him the honor of being made one of the regular collaborators of *Revue Internationale*. "Our Camille" knows a lot of things about bees, and knows how to tell what he knows—probably better even in French than in English.

"THE COW PEA" is the title of the latest publication issued by the Experiment Farm of North Carolina State Horticultural Society at Southern Pines, N. C. This book, neatly bound, and illustrated in plain and concise manner, discusses the value and uses of this important crop—the cow pea. Every reader can get a copy free by writing to the Superintendent of Experiment Farm, Southern Pines, N. C.

FRANK BENTON, formerly Assistant Entomologist at Washington, has been advanced to the post of Apicultural Investigator in the Department of Agriculture. The creation of this special commission is one of great interest to bee-keepers, and it is a matter of no little pleasure to know that they are thus recognized by the United States Government. And Mr. Benton is well qualified for the position.

A \$100 OFFER.—Judge E. Y. Terrall, in the Lone Star Aplarist, made the following offer:

After a research and study for a lifetime, I have failed to master the little honey-bee. I will give 12 months' time and \$100 to any one who knows all about bees to answer two questions that are of great importance to the aplarist, viz:

1. How "successfully" to fertilize queens in confinement.
2. How to distinguish laying workers from other bees.

Cunning Judge Terrall has a string to that \$100. When the claimant comes with his answer to his two questions, the judge will say to him: "Do you know all about bees?" and the man who knows enough to answer those two questions will know and confess that he has some things to learn. Then the judge will say, "My dear sir, do you not notice that my offer is only 'to any one who knows all about bees?'"

A BEE-HOUSE OF F. R. WEBSTER is presented on the first page. When sending the picture he wrote as follows:

I send a picture of one of my bee-houses, which is 50 feet in length and 7 feet wide, double deck, with a walk back of the hives 3½ feet wide. It will be observed by looking

closely that only half the hives show plainly, as part are painted red and part of them white; the red ones show very dimly, however.

The house contains 29 colonies, mostly in hives of my own make, with half-lock corners, glued and nailed both ways, and I have yet to find one that has even started at the corners.

I make these hives the same size as the dove-tailed hive, and use the Hoffman frame, preferring it to any other, by experience. The cover to the hives I made is smaller than the cover of the Simplicity hive, only I rabbet the bottom edges ¾ x ¾ which fits over the body of the hive, preventing the entrance of bees or storm. I also use the super made after the style of shipping-case with glass in the side. The cover is easily raised at any time, allowing one to see at a glance how nearly completed the sections are. After trying several kinds I have concluded that my own make of hive is superior to any other.

F. R. WEBSTER.

NOMINATIONS FOR DIRECTORS.—Mr. P. H. Elwood says in *Gleanings in Bee-Culture*:

"In regard to making nominations for Directors before election, why not tell well enough alone? Our Association is doing well; but as soon as nominations are made there will arise the suspicion that some one or some clique is trying to run it. Better put up with some minor evils or inconveniences than to have the camp divided."

That's one way of looking at it. But may not some one take the opposite view and say that some clique is running the National Association just because no nominations are allowed. No one being named beforehand, a large number will not think of any new name, but will always vote for those already holding the position, while the scattering votes are so scattering that no one candidate among them can ever expect election. At present there is practically no chance for any except the old incumbents, except some one resigns, declines a re-election, or leaves this world. But we are not complaining.

## CONVENTION NOTICES.

**Utah.**—The Utah State Bee-Keepers' Association will hold its annual convention in the City and County Building, Salt Lake City, April 5, 1902, at 10 a.m. This promises to be an interesting convention. All are invited. It is desired to form an exchange for the protection and benefit of our bee-keepers. Come and aid a good cause. It is expected that every county will be represented.

E. S. LOVESY, Pres.

J. B. FAGG, Sec.

**Chicago.**—Some amendments to the constitution of the Chicago Bee-Keepers' Association have been proposed, and the Executive Committee has ordered them to be brought before the next regular meeting for decision. It is proposed to change the name to "Chicago-Northwestern Bee-Keepers' Association;" and to change the time of meeting to "the first Wednesday and Thursday of December, or such other days as may be selected by the Executive Committee." The object of this is to make Chicago the rallying point for the whole Northwest, or so much of it as is likely to run to Chicago to trade or attend expositions. I believe our association is now the largest local association in America. We remitted to the National Association for 62 members. Our mailing list is about 300, or about ¼ of those in our territory.

HERMAN F. MOORE, Sec.

## The Emerson Binder.

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,  
144 & 146 Erie Street, CHICAGO, ILL.



# AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 THE OLDEST BEE-PAPER IN AMERICA

42d YEAR.

CHICAGO, ILL., MARCH 6, 1902.

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## \* Editorial. \*

**Comb Honey Not Manufactured** is the heading of an item sent to the farm papers of the country by the Frank B. White Co., of Chicago, who wrote us as follows:

AMERICAN BEE JOURNAL—

Gentlemen:—You have doubtless noticed in a number of daily and weekly papers a recent statement going around, to the effect that much of the comb honey offered for sale is artificial, cleverly manufactured by special machinery, and filled with syrup, of which the principal ingredient is glucose. This has been given such publicity that it worked undoubted and deplorable injury to the honey market, so that in some localities the demand for comb honey has fallen off almost altogether. A statement of this kind might be excused if it was founded upon fact, but the truth is that there is not a particle of artificial comb honey on the market, and any comb honey offered for sale may be purchased with entire confidence that it is genuine.

So many farmers are interested in honey, commercially, that we thought a brief notice, similar to the enclosed, would be a great favor to your readers, in that it will start a counter-agitation, and so restore the confidence of honey-users. Will you kindly run this notice in an early issue of your paper, of course making no charges for it, as we are simply doing this for the benefit of the honey-producers, feeling that a great injustice has been done them?

Thanking you in advance for the favor, we are,  
Yours truly,

FRANK B. WHITE COMPANY.

The item referred to in the foregoing, reads thus:

### COMB HONEY NOT MANUFACTURED.

A statement has been going the rounds of the press to the effect that nearly all the comb honey on the market is manufactured by a "cute machine," that the combs are filled with glucose and capped over by a mechanical process. The facts are, there is no such thing as manufactured comb honey anywhere in the United States, and in proof of this the publishers of leading bee-journals of undoubted responsibility offer one thousand dollars for evidence to show that comb honey is manufactured, or that such an article is for sale in the open market. Although this offer has been out for fifteen years and has been duplicated by other responsible persons connected with the industry of bee-keeping, no one has ever seen fit to take it up.

The United States Department of Agriculture has put out several published statements denying the existence of manufactured comb honey, and the American Grocer, the leading trade organ of its class, assures its patrons that all the comb honey on the market is absolutely the product of the bee.

The Frank B. White Co. have placed bee-keepers everywhere under everlasting obligation to them for this commendable effort on their part. Undoubtedly every agricultural

paper will be pleased to publish the item, which places the truth about comb honey before its readers in a very clear and concise way.

The Frank B. White Company are agricultural advertising agents, and are as clean and "White" as their name indicates. Surely, they have interested themselves in a worthy cause—one in which we trust every farm paper will co-operate, and thus aid in seeing that justice is done the honorable industry of honey-production.

**A Spraying Bulletin** has been issued by the Agricultural Experiment Station of the University of Illinois, giving important details of spraying that are excellent, but it seems a pity mention was not made of the fact that for the good of the fruit-crop, if not for the good of the bees, no fruit-trees should ever be sprayed while in bloom.

And this reminds us that a certain Wm. Stahl, a maker of spraying outfits, gives, in private letters, some spraying instructions "in connection with the instruction on spraying in catalog." He says:

"Allow me to advise that you give your trees one additional spraying this year [1901] while in full bloom, using for this spraying Bordeaux Mixture and adding thereto Paris-green in the proportion of 1 pound to 100 gallons of Bordeaux Mixture. Trees that have been sprayed the past year while in full bloom the results have been simply wonderful. In most cases trees have been overloaded, with scarcely a wormy or scabby apple, pear or plum to be found."

And this in face of the fact that practically all the agricultural experiment stations and experts protest against spraying fruit-trees when in full bloom. Bee-keepers will know how to condemn such advisers as Stahl.

Not only is there danger of poisoning the bees when spraying in full bloom, but there is danger of killing the pollen of the delicate blossoms, and thus preventing the full fertilization and consequent production of a crop.

**Is Swarming Desirable?**—During the winter months, and before the time for active work with the bees arrives, the man or woman whose veins are filled with the blood of a true bee-keeper will spend many an hour planning for what he is going to do when old Dame Nature thaws out. Among the interesting problems over which many will puzzle is that of swarming. Years ago it seemed to be the somewhat settled opinion that for best results each colony should give one swarm. Nowadays we hear less said in that direction, and some of those who advocated it are among the most earnest seekers after some plan by which the bees may be thwarted in all their efforts to swarm.

If Mr. A. is in a locality where there is a single flow, that flow coming comparatively early, as from white clover, he will have about all he can do to get his colonies in condition for the harvest, and when the forces of any colony are divided by swarming, that means a diminution of his crop.

If Mr. B. lives where there is a long-continued flow, and especially if there be a good late flow, a swarm coming early will be in condition to do fine work on the late harvest, and together with the mother colony the two will store more for the season than the mother colony alone would have done if there had been no swarming.

So the general conclusion is that in Mr. A.'s locality swarming should be discouraged as much as possible, while Mr. B. should do all he can to encourage at least one swarm from each colony.

But is there not a general fallacy in that general conclusion? Suppose each has an apiary of 50 colonies, and he has pasturage for 100. If Mr. A. keeps down all swarming he will have more honey this year, but if he allows his colonies to double by swarming this year, will he not have a larger harvest next year, and the years following? So for Mr. A. is it not the true policy to increase till he has his field fully stocked?

If Mr. B. doubles by swarming, he will have more honey this year than if he had only the 50 colonies to store. But suppose that instead of the swarms having only part of the season in which to store, they would have the whole of it, would not the yield be greater? In other words, instead of having the 50 colonies and their swarms he could have 100 colonies without swarms at work throughout the season, would he not have a greater harvest than with the 50 colonies and their increase? So is not his true policy exactly the same as that of Mr. A., to increase till the field is fully stocked, and then, if he can, to suppress swarming?

It will not do to be too dogmatic in such matters, and the reader will notice that questions are rather asked than statements made. The subject is one upon which it is desirable to have light, and the views of any who are in position to shed light upon it will be gladly received.

**Basswood and Wax-Worms.**—S. A. Niver, in Gleanings in Bee-Culture, says that while wax-worms bore or eat holes in pine top-bars they never trouble those made of basswood. Have others observed this? Serious objection has been made to basswood in any part of a hive on account of its undesirable habit of warping and twisting.

## Convention Proceedings.

### Report of the Ontario Co., N. Y., Bee-Keepers' Convention, held at Canandaigua, Dec. 12 and 13, 1901.

BY F. GREINER, SEC.

It was the 12th annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association and a bee-keepers' institute was held in connection with the meeting, under the auspices of the Department of Agriculture and Bureau of Farmers' Institutes.

The President, W. F. Marks, in his message, dwelt upon the importance of organization at the present time, pointing out some of the benefits of the local organization and what had been accomplished through it. He compared the prevailing low price of honey with that of an early date and suggested that it was about time for the producers to name the price of that product. He censured the *teachings* that honey is a luxury, and called the attention of his hearers to the fact that most of the food upon their tables was luxuries and yet much of it had come to be looked upon as a necessity, and why not honey? He thought the bee-keepers, through their periodicals, were much to blame for spreading and maintaining the luxury idea, and it should be discouraged. The producers of other foods did not try to make the consumer believe that their foods are luxuries. The bee-keepers should not only fix the price, but it is the duty of each to work up a local trade, and thus increase consumption. He spoke of the display of honey at the county fair and urged bee-keepers to take advantage of this opportunity to advertise their honey, and at the same time to secure the liberal premiums offered. In conclusion he told his hearers not to get discouraged, but to have some desired object in view, and to work for that object.

#### HONEY STATISTICS OF THE UNITED STATES.

In the discussion following, it was suggested to appeal to the Government for aid in collecting monthly statistics as to amount of honey produced, and other matters pertaining to apiculture; but it seemed to be the sense of the meeting that the Government would not be able to collect reliable data as the present staff of regular correspondents would not be in any position to know or find out what the honey crop was. It was believed that the National Bee-Keepers' Association could do this work much more effectively, and a resolution was adopted later on asking the officers of said body to devise a plan and put it in operation.

#### THE GOVERNMENT AND MATING OF QUEENS.

Further, it was proposed that the Government establish an apicultural experiment station on some small island where no honey-bees were found present, and assist the bee-keepers to improve the honey-bee. In such an isolated place the mating of the queens could practically be controlled, and such a course would be more effective than mating queens in tents, for, when unconfined nature would usually select the strongest drones as the successful ones; in the tent no such selection could take place. It was believed that we had just as good bees in America now as anywhere on the globe, and what money our Government expends in importing queen-bees from other lands might better be made use of in the line proposed.

While the Association did not take action on this proposition, still the matter was brought up again by another member, showing that it had gotten a hold. Undoubtedly it will be pushed on at some future time.

#### APIARIAN EXHIBITS AT FAIRS.

As to the securing of liberal premiums at agricultural fairs it was shown that even a single person could sometimes accomplish a great deal. The agricultural society in a small town of Ontario County, had thus been influenced, and had also increased the premiums on apicultural products and implements from 50 cents to about \$30, in consequence of which the bee and honey exhibit had been

a most attractive feature of the fair. It was the general opinion that, while bee-keepers take great pride in making creditable displays, they cannot afford to spend time and money without fair pay.

#### "BEE-KEEPING—ITS CHARACTER AND REQUIREMENTS."

Hon. R. L. Taylor, of Michigan, delivered an address on the above subject. He said bee-keeping differed from ordinary farming in so far as the bee-business was subject to greater variation; there were too many exceptions to the rules, and the bee-keeper had to be on the alert all the time. The farmer may grind away each day without much thought, but each day in the apiary brought new work and needed thought; new problems had to be worked out constantly. To keep bees successfully, he said, one would have to observe the following: Abundant and timely breeding of worker-bees, requiring an abundance of stores, for bees used scantily from scanty stores. All shortage should be remedied at an early time. Sufficient supply was not enough. Attending things in season was essential, procrastination is the thief of the honey crop.

In addition to giving plenty of honey some of the sealed stores should be uncapped at short intervals, as bees would not use sealed stores as fast as was desirable for best results. The more they eat, the faster they would breed.

Spreading of the brood, he said, should be practiced very cautiously, giving empty combs or uncapped frames of honey in the center of the brood-nest, as was thought best. He recommended the Heddon method for treating the young swarms, using Heddon hives of 5 Langstroth frames capacity, with queen excluding honey-board between brood-chamber and supers. One empty comb given in the center of the brood-nest, he said, would prevent pollen being stored in the sections. He is getting all the surplus from the young swarms, drawing on the old colonies for bees to re-inforce the swarms. In the fall the young and the parent may be united, killing the old queen, thus practically re-queening all his colonies that cast swarms. How many bee-keepers, he said, have I seen, that would leave the supers on the mother colonies, giving no surplus room to the swarm, thus losing the greater part of the crop. In view of the fact that section honey built by swarms is always of higher quality than honey stored by old colonies over old combs, it is advisable to get all surplus from the swarm, for the market demanded unstained section honey. If it was desirable to produce well-filled sections, sealed all around, then not too much room should be given. In other words, the bees should be crowded; but if quantity is the object regardless of fancy filling, then more room should be allowed.

All comb honey, as soon as finished, should be taken from the hives and stored in a warm, dry room; unfinished boxes, when found, to be returned to hives where room was needed.

The improvement of our stock should be looked after during swarming-time. All queens from colonies not doing well should be removed and queen-cells from good stock should be inserted, utilizing as far as possible all the cells from the best colonies.

However, it was Mr. Taylor's opinion that Nature had already done all it could do in the line of producing a hardy bee, as well as one of greatest honey-gathering qualities; she had weeded out all the weak and the indolent, while she had preserved the strongest and the diligent; a process that had been in operation a great many thousands of years, we could therefore not hope to make any more gain in these directions.

In the line of perfect capping of honey, the honey-bee might be improved. The color of bees could be changed, or in other lines, wherein Nature had not busied herself, had not cared seemingly to bring about greatest perfection, there we might expect to accomplish something. As a comparison he said: Hardiness and fleetness had been developed in cattle, and long horns had been given them, so they might protect themselves against enemies and endure the hard winters. It was not possible to make any improvement there, but evidently Nature had not cared to develop the beef and milk-producing qualities of cattle, and man had brought about wonderful changes. The difference between bees and cattle was, that Nature had developed as far as possible those qualities in the bee that are desirable for man; but she had not done this much for



cattle. The high qualities that our present cattle possess are of most value to man, but of no value to the cattle. The high qualities bees possess are valuable both for the bees and for man. The bee had already a long pedigree.

As to breeding out the swarming habit he said when swallows and rabbits forget to rear young then bees will stop swarming.

Retrogradation, he thinks, is due to the bee-keeper nursing up weak colonies. There was virtue in the sulphuring match. Nature would destroy them all.

#### GENERAL DISCUSSION.

In the following discussion many points were brought out. One member said he had more call for such honey as was not filled and sealed next to the wood of the sections. Mr. Riker, of Iowa, asserted that he could take the poorest queen of a whole yard and rear as good queens from her as from the very best one. It depended wholly upon the manner she was reared. He did not give a special method of rearing queens, except that they should have an abundance of food. Others of the convention, however, took exception. Mr. Olmstead said that would eliminate all chances of improvement. Mr. Riker had observed that there was a great difference in the longevity of bees from different colonies.

Mr. Olmstead, of New York, brought out this point more clearly in his address later on. He said he had found that some colonies would feed their young more plentifully than others. The young larvæ in some colonies would be surrounded with an abundance of food, not so in others, and he theorized that the more abundantly fed larvæ would develop into stronger bees, in particular as to their wing-power, than those scantily fed. The wings, he said, are the most important indispensable tools for the field-bee, and when they are gone, or worn out, the bee's utility is gone and she dies. The wings of the bee develop at the very last end of the imago's life, and if the growing insect runs short of material, the wings will of necessity suffer most, and a short-lived bee is the result. To ascertain the truth of the matter he had made an experiment, selecting two colonies of equal strength; one, which seemed to provide their young always with an abundance of food, the other, which exercised great economy in this direction. Into each of these colonies, both of the German race, he placed a comb full of newly-laid eggs at the same time, said eggs originating from a very yellow Italian queen. When the time came for these yellow bees to become field-workers he kept close watch of the two colonies. The colony that fed their young abundantly, retained yellow Italian bees about two weeks longer than the one which provided scantily.

Mr. Olmstead did not agree with Mr. Taylor on the point that Nature always weeded out the poor colonies. He said the bees that stored the most honey in the brood-nest would come through the winter best, but they were not the ones the honey-producer wanted. He would prefer such bees as would store the least in the brood-chamber; but Nature would weed them out without he interfered.

A year ago Mr. Terry said, in a paper read at the convention, that bees would adapt themselves to different conditions according to the environments. If bees were employed for a term of years building comb-honey, they would eventually become a fixed comb-honey strain. Mr. Olmstead said he could not see how an influence could be exerted upon the progeny of the queen-bee by the workers, since they were not directly concerned in propagating the race except as it might occur through nursing the young. To see what this influence might be, he conducted another experiment, selecting two colonies, one an Italian and extremely vicious, the other a brown German and very gentle. The queens were exchanged and results noted. After a few days, and after the queens had begun laying in their new homes, the yellow vicious bees were nursing the gentle brown young, and the gentle brown bees were nursing the vicious yellow. As soon as the yellow ones had hatched in sufficient numbers in the German colony, they showed unmistakable signs of fight just as their sisters in the other hive. But the black ones seemed to show the bad bringing up they had had, and were found on the warpath, which he could only account for on the theory of "bad company corrupting good manners," the Italians giving the word and set the example, the innocent blacks followed suit; and not because the

vicious nurse-bees had instilled viciousness into their blood. Mr. Olmstead thinks he has some proof that qualifications worker-bees have acquired, cannot be transmitted to the future offspring of their mother.

#### Developing the Home Honey Market.

Very few producers are good salesmen; this is perhaps quite true. Nevertheless, every producer of honey can, by a little effort on his part, do something towards creating a demand for his product in his town, among his neighbors. The easiest way to dispose of a honey crop is, of course, to send the whole crop to a commission man in some large business center, and take what the commission man sees fit to give for it. That is the easiest way. But is it the best way? Do you get as much money out of your product as you might or ought to? A great many people follow this plan, I know. They are too easy to make an effort. I know of but few times that sales made by commission men for me were satisfactory, and a great many that were most unsatisfactory. Unwisely I sent a small lot of honey to Pittsburg this year. The firm I shipped to quoted new honey at from 17 to 20 cents before I shipped, and I supposed my honey would sell quickly somewhere near their figures. But what were the facts—what was the result? Well, after waiting over two months, returns were made disclosing the fact that my honey had been sold at 12 cents per pound! I considered that I had been swindled out of \$15. The market report enclosed in the letter showed a wonderful decline in price of honey in that market, although another firm from the same place, and having their place of business on the same street, quoted me prices at 16 to 17 cents. Pittsburg business men are very apt to quote high and sell low, all of them. I don't think in other cities they are quite as bad. But, after all, this one fact is true: The large centers are generally well supplied, often overstocked, and this brings down the price. The remedy seems quite simple: *Do not send your honey to the city.*

I know from experience that a great deal of honey can be sold near where it is produced. I am myself naturally disinclined to do any peddling, but for the sake of the experiment I decided to make a trial this year. It seemed pretty hard work for me, and I encountered some very unpleasant things. When you have to make a dozen calls, have the door slammed in your face repeatedly, being treated as though you were a dog, and then perhaps not sell anything, or only a ten-cent box or so, is discouraging, and makes you wish you had stayed at home. On the other hand, you will meet pleasures unexpectedly; you will find some friendly good people with whom it is a pleasure to deal; and though you may not always sell to them, you go away from such a house with a good feeling. Sometimes these people are very kind, accommodating and painstaking; they help you make sales with their neighbors and friends; they insist on giving you your dinner, etc. You feel encouraged, and you begin to think the people are not so bad after all.

Occasionally you will enter the home of a storekeeper who sells honey from his store. He may tell you how you hurt his trade; he may ask you if you think it fair for you to supply his customers with the very article he is trying to sell, he having to pay big rent, and you perhaps not even a resident of the same town! You, of course, must meet his argument somehow or other. If you sell extracted honey, you can ask him how much of such honey he sells in a year, or whether he sells any at all. If he does not, how can you hurt his trade? It is right the opposite—you may benefit his trade by developing the market, getting the people to use extracted honey by showing them a good, pure article, and letting them sample it—giving the children a taste, too, telling the people how extracted honey is produced, perhaps showing them a photograph of your extractor and how it is manipulated, etc. Then after you have made converts, the merchant can sell your honey in quantities, ten times as great as he ever was able to.

The extracted honey the average merchant keeps is usually put in jelly tumblers, is of light color and of good body, but, whew! what a taste, compared with a genuine article that comes from the hive.

Tell the merchant you will supply him with honey free from such glucose mixture as he is selling, at a living price. If he objects, then tell him you have no other way but to go around from house to house and make sales to his customers.

Extracted honey is really a much better and safer article to handle, either for the bee-keeper or groceryman, than is comb honey. Very few people outside of the honey-producer know how to handle comb honey properly, and without getting it to leaking. I sometimes do wonder that storekeepers will handle the article when I see in what shape they keep it—leaking, daubing everything, shelves all sticky, cases dirty with the dust that settled on them, broken combs, etc. Now all this seems unnecessary, and yet it is not an uncommon thing to be seen.

In case of extracted honey how different it is! Unless a package breaks there is scarcely a leak. The honey is put up in original packages by the producer, some perhaps in tin, some in glass. They can be handled roughly, turned upside down if sealed; on the whole, such should give satisfaction all around, and do. The only drawback is the *granulating part*. On this the consumer needs enlightenment. After he once understands this matter thoroughly he will object to it very little. In fact, a great many people think the extracted honey just delicious when it is semi-granulated. I found many people that were just taken up with it when it was so partly granulated, sort of semi-transparent and almost too thick to run at all. When our honey gets solid and hard in small-mouthed and deep glass packages, it is then not in good shape to be sold and it must be liquefied. By keeping them in a very warm place for a time the honey will come back to its liquid state without opening the packages. I would not use small-mouthed deep glass bottles anyhow, and, if I did, I would not put up any more of the honey than I could dispose of soon. As long as we have our honey stored in tin we can liquefy it very easily.

I do not store honey in wooden receptacles and let it become hard. It requires a great deal of work to remove solid honey from wooden packages, as I have found by experience. This can and should be avoided.

I do not object to selling to retail dealers, in fact I am anxious to do so. I tell the groceryman so; but I do object to his making an unduly large profit. I also tell the groceryman that he does not understand handling comb-honey properly; that the honey he keeps for sale in the way he does rather disgusts the purchasing public, and that the honey I sell, or show to the people as I go from house to house, looks neat and clean; it has not been punched full of holes by careless handling, therefore does not leak, etc. If I can sell him a number of cases of honey I caution him to exercise more care in handling the sections, clean up all leaks immediately, and keep things looking perfectly tidy.

I cannot say that I was entirely satisfied with my peddling trip, although I sold some \$28 worth of my product. I thought I ought to have sold more. The beauty and the surprise, however, was, that orders came in for more honey in consequence of my trip right along after that and I expect in the future I will have very little trouble in selling a large share of my crop in my vicinity.

If the bee-keepers as a whole would follow a similar course in disposing of their crop, there is no doubt that the price of honey would very soon rise, for it is the large business centers that fix the price of it, and these centers are over-supplied now. Let these people get anxious for our honey, and then you can ask a fair price, and get it. We do not produce too much good honey at the present time; the trouble is the uneven distribution. F. GREINER.

A brief history of the Ontario County Bee-Keepers' Association was given by Mr. Olmstead, mentioning the names of the founders, etc., and was responded to.

#### HUNTING BEES.

In his talk on this subject, Mr. H. L. Case gave some valuable hints to those who like this sport. He said he had given up the "bee-box" with its bait, to start a line, long ago, but lined the bees from watering-places; he had found that bees do not travel far carrying water, but take it from the next puddle, or spring, watering-trough or the like. If bees are found working in such a place near a piece of woods, one may be sure to find the bees near by. To locate the bees is an easy matter—just keep the eyes open. He had found in a few afternoons 24 trees within a few miles of the village, and said there were 75 more in the woods. Six bee-trees he found one afternoon, lining all from one and the same little spring.

#### HOW MR. RIKER MANAGES.

Mr. Riker, of Iowa, produces only extracted honey; he told the bee-keepers how he managed his bees. He winters them in single-walled three-story hives; says they give better results than chaff hives in Iowa. The lower story is empty, the bees with the combs containing 40 pounds of honey are in the second story, and the upper story is filled with absorbing packing material. A temporary wind-break of cornfodder is set up around on three sides of the apiary. This shelter he thinks is most essential. Protected in this manner his bees come out of the winter with 12 pounds of bees per colony, which fill the hives with brood so that he soon has from 18 to 21 pounds of bees in each hive. The lower and empty stories are filled with combs, the packing is removed from the upper story and eight combs are given here, the eight given occupying the same room that the 10 would occupy.

When colonies become too strong, he removes combs of brood and adhering bees and forms increase. He does not take off any honey till the season is over. The upper stories are taken to a basement room and kept warm for some time, when he extracts the honey. The lower stories are emptied of their combs and the hives gotten ready again for winter.

The highest yield he has ever had in one day from one colony was 18 pounds from clover.

When queens are discovered that are not up to the mark, they are removed at once and young fertile queens are given. He introduces queens without further ceremony; as soon as the dequeened colony becomes uneasy the new queen is allowed to run in at the entrance and is accepted. Incidentally he made the remark that one of his queens, which had been clipped, did good service for seven years.

#### FOUL BROOD.

Mr. R. L. Taylor then spoke on foul brood, describing symptoms and appearance, and said he had cured many diseased colonies by shaking the bees off from their combs, and giving them a new hive and foundation-filled frames. However, when the disease is in the advanced stage, and could be told by the odor when entering the apiary, he thought burning was the safest and best. When he first had foul brood in his yard he said one of the affected colonies cast a swarm which he hived on foundation and it remained healthy. This showed him the way. He had found that foul brood did not spread as rapidly as we are led to believe, but advised to exercise great care to prevent the spreading of the disease by bees robbing. The work of shaking off the bees should be done rapidly; it would not do to treat diseased colonies when bees were flying. Diseased bees should also be prevented from entering adjoining hives. Early in the morning, he thought, was a good time, before the bees got to flying. He cautioned not to leave any honey lying around anywhere. With care, the disease could be cured; one need not get into a frenzy because his bees have the disease.

The question-box was conducted by Mr. Taylor, and proved to be interesting, but lack of space forbids going into the details. O. C. CO., N. Y.

## Contributed Articles.

### No. 2.—Bee-Keeping for Women.

#### How to Begin the Business of Keeping Bees.

BY EMMA M. WILSON.

If you are going into bee-keeping as a business you should begin at the very beginning, and know something about bees.

When I first commenced driving I did not drive a horse until I knew how to harness and unharness it. I wanted to learn enough about the harness so that if anything went wrong about it I would know what it was that was wrong, and how to remedy it; and more than once I have



been glad I knew something about the harness, as I should have been in a bad plight if I had not.

A beginner of to-day has such an advantage over a beginner of say 40 years ago. Almost everything then had to be learned by actual experience, and some of the experience was costly. I venture to say that some of the veterans would have paid a good price to have had some of their questions answered 40 years ago. Now, all the beginner has to do is to send the question to the American Bee Journal and back comes the answer. And just think of working with bees without a smoker and all the modern conveniences we have to-day! So, beginner, whoever you are, count your many blessings, and do not forget under what bright prospects you are starting your venture, and don't you dare to get discouraged. If you are tempted in that direction, just think back what it would have been 40 years ago, and all your discouragements will vanish like smoke.

Who knows what bright prospects the bee-keeper of 40 years from now may expect? With bees with long tongues, and a non-swarming strain (I certainly hope they will reach that point during my lifetime), bee-keeping 40 years from now may be a perfect dream of bliss, even if at present it is not.

There are so many and such good books and bee-papers that a thorough study of them will give you a pretty good foundation to start on. But there are some things that you must get directly from the bees themselves.

Suppose you start with a very few colonies. That will give you a chance to experiment with the bees, and gain experience. Then, if you do have some loss in learning your lesson, it will not be as heavy as if you had a larger number.

I don't see why a woman is not in every way qualified to keep bees as well as a man, if she has the brains and knows how to use them. To be sure, in the matter of strength man has the advantage, but it is usually more than balanced by a woman's power of endurance, patience and perseverance.

Let us hope that if you are going to keep bees you are in a good locality. That has so much to do with your success or failure. It seems to me that in bee-keeping more than any other business there are so many elements entering into it over which you have no control. You may have your colonies ever so strong, all ready for the harvest, and yet not get any crop—because there is no nectar in the flowers. Or, the weather may be too cold. Or, it may be too wet, or too dry, or there may not be any clover, etc. Well, I always feel better reconciled to a failure of that kind than I would to have an abundant flow of nectar, and not have the bees ready for it.

Unless you have some capital to fall back on, it is well to make the bees pay their own way. I am not sure but it is a good plan to make them do it any way, capital or no capital. You may not increase your colonies quite so fast, but you are on pretty safe ground. If you keep a strict account of what your bees cost you, and what they bring in, you are a good deal more likely to make money on them than if you run on the haphazard plan, because you will be more careful of your expenditures, and buy only what you really need.

Another very important item is that you have good stock. It costs just as much to keep a poor colony of bees as a good one. They may be equally strong and one colony give you 50 pounds of surplus honey, and the other only 15 pounds. You will readily see that the 15-pound colony is not a profitable investment. What will you do about it? The first thing to do is to kill the queen of the poor colony, then give them a queen reared from your best colony. You may not get as good a queen as its mother, but you are not likely to get as poor a one as the one you killed; and by breeding from your best queens, and killing your poor ones, in time your stock must be improved; and good queens mean more dollars and cents every time.

What do we mean by good queens? We mean the ones that produce workers that are hardy, and are good honey-gatherers. When we have queens that will produce that kind of bees, we call them "good queens." We don't care whether they are yellow, leather-colored or black; whether their bees are three-banded or not, only so they get the honey.

To be sure, if we could have their good qualities, and the golden yellow bands combined, we would like it, but we are not going to give up the good workers for the sake of having yellow bees, no matter how pretty they are. It is honey we want. I would pay three times as

much for a tested queen that had been tested as to the quality of her bees as honey-gatherers, as I would for a tested queen that had been tested merely as to the number of bands her bees had.



## Moldy Brood-Combs—Bees Fed in Winter Cluster.

BY G. M. DOOLITTLE.

"As I have read your answers to questions in the American Bee Journal for others with great interest, I have been wondering if you would answer one for me in the same paper. What I wish to know is something regarding moldy combs. I fear, by the appearances of things, that I shall have moldy combs in the spring, as my cellar is very damp and I can smell the moldy combs already. What will be best to do with them in the spring, should any be very moldy?"

I do not think that you need wonder about your questions being answered through the columns of the American Bee Journal so long as you will ask questions which will interest the readers of that paper, for even the most advanced apiarist often runs on little kinks when reading replies to queries which he has not thought of before—kinks which often prove of great value to the one who wishes to do the most possible that he may succeed in his undertakings with the bees.

Regarding the moldy combs; we will hope for the best, thinking that your fears may prove unfounded. But should the combs come out moldy, probably not more than one out of five or six will be very bad. Those which have but little mold on them can be left in the hives, where they will soon dry out enough so the bees will make them sweet and clean. If any are from one-third to covered all over with mold, it is well to take them from the hives and hang them in some dry, airy room till they are thoroughly dried out and needed by the bees. Do not attempt giving them to the bees while they are all wet and slimy, for nothing seems to discourage a colony of bees so, as nasty, wet, moldy combs.

When they get all dry, and the colonies from which they are taken are needing more combs, take the now dried combs down, and, with a rather stiff brush-broom, made from broom-corn, brush them off thoroughly (but not hard enough to break the cells, when you can put them into the colonies, one at a time, and the bees will clean them up so nice that, should you look for them two days after, you could not tell which they were, unless you marked the frames or the place in the hive where you put them. It is best not to give any colony more than one at a time, unless the colony is a very strong one. In three or four days you can give another, and so on till you have them all in the hive.

I never yet saw a comb so badly molded but what the bees would make it apparently as good as ever, if the above plan was followed.

Some say, melt up such combs; but so far as I have tried, the mold will absorb the most of the wax so that very little is obtained when melted by any process, and scarcely none at all when melted in the solar wax-extractor, as the fibre of the mold absorbs what little wax remains. If I were to melt up such combs I would calculate it would pay me to have them cleaned up by strong colonies before melting, through the extra amount of wax which could be obtained.

### HOW ARE THE LOWEST BEES IN THE CLUSTER FED DURING WINTER?

"I have kept bees but a little while, so I do not claim to know much about them, but I am anxious to learn. One of my colonies in the cellar has bees hanging below the frames and I have been wondering how these lower bees are fed during the winter. A neighbor tells me that these lower bees go up into the cluster, and on the combs, every little while, so that they may have access to the honey. Is this right? An answer through the columns of the American Bee Journal will be appreciated."

The story of your neighbor is one that has been told a great many times, and is based on the very reasonable supposition that each individual bee must help itself to honey directly from the cells containing the same. But, reasonable as it may appear, I am led to believe that the story has no foundation in fact. I have just been into my beecellar to see if I could not discover something of the

kind going on, and have to report that I cannot discover any such movements. Some of the colonies have bees hanging below the frames to the amount of one-fourth of a good-sized swarm, at least; and if such moving up after honey was going on as has been supposed, it would seem that now and then a bee would be crawling in after honey, especially as the lowest bees would have to travel some six or eight inches up through or over the cluster to get where the honey is. But I saw nothing save a big cluster of nearly or quite motionless bees hanging and overlapping each other—each one, or nearly so, having its head under the body of some other bee.

Of course, it is impossible to see or know just exactly what is going on inside of the cluster of bees during winter; but I had always supposed, and so believe now, that bees give honey to each other; that is, the bees which are near the honey in the combs give to those under them, and these, in turn, to those next further away, and so on till the last bee is reached at the very bottom, outside of the cluster. Bees are continually passing honey around during the summer, and why should they not do the same thing in winter, when it is more to their interest to do so than in the summer time, when all can go about as much as they please? All know that the honey carried with a swarm is passed around, when bad weather comes immediately after the swarm issues, and all are kept alive, or the whole perish together.

I am well aware that these things are of minor importance; but I have always believed that it is better to be informed on all of the minutia of bee-keeping than to pass anything by as non-essential, as such a course allows us to drop easily some important point which would otherwise be brought to light.

Onondaga Co., N. Y.

## \* The Afterthought. \*

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

### "THE HOME CIRCLE" DEPARTMENT.

Exit "The Home Circle!" A surprise for us that was not agreeable. Gone, but not altogether forgotten, Prof. Cook may be assured. In the real home circle it oft happens that the one who is gone is, in a kind of a way, more emphatically permanent and present than those who remain. We can hope that some of the tender sentences of our "Home Circle" may enjoy a portion of the same sort of immortality. Page 89.

### A "HORSE" THAT NEVER WAS A COLT.

So Mr. Willcutt never saw a horse except he was once a colt. Most wish I could say so, too. I have a horse that was never a colt. And this long, trying cold-spell I have to go out and stand over him for a long while every day. It isn't because I love him so; (Never saw a man that loved that kind of horses) it's merely that "a cruel fate has fixed me there." Page 51.

### AIKIN HITS THE "BULL'S-EYE."

You often hit the "bull's-eye," Mr. Aikin; and one of the times you did it was when you said that a man may be an expert with insects, and yet a failure in dealing with his own kind. Jars their hive and wonders at the results. Can never get over expecting them to look at everything from his own point of view—and swallow all he tells them.—and frequent his feeder when he has put no feed in it—and give up swarming, and everything else, when he sings out, "Whoa!" Page 69.

### EXTRACTING WITH COMBS THE OTHER WAY.

Undoubtedly, thin honey can be thrown from combs placed "t'other way;" but part of the centrifugal force is wasted against the side of the cell in so doing, and we need it all. Cases in which the honey will not come out at all will be more frequent, and the percentage left in the combs will be larger when you get the "improvement" running. At best the amount left sticking to the comb is a sadly large part of

the whole—say a quarter-pound to  $4\frac{3}{4}$  pounds, thrown out—5 per cent—and I should expect twice as much, or 10 per cent with the suggested position. Of course, the top-bar should be out, to take advantage of the slant of the cells, as Mr. Doolittle suggests, and also to support the comb lest it may break. Page 70.

### BEES DYING IN THE HIVE.

I don't believe moribund bees will be satisfied unless they can get further away from the combs than  $1\frac{1}{2}$  inches. Although their efforts to get further away to die may not be any great disturbance to the colony, yet it is as far as it goes a disturbance, and a disturbance introduced where we want to do all that we can in favor of quiet. Sad to do so much "carpentering" and stop short of satisfaction. Why not go a little further and have the death-chamber outside altogether? Page 70.

### EAR BETTER THAN THERMOMETER.

That was a wise saying of Mr. Pettit (page 71) that an acute ear is a better guide than the thermometer as to just how warm to have the cellar. That is, I suppose, if you detect a wrong note try warming or cooling—or both.

### AMOUNT OF WATER IN HONEY.

That a Professor (with a big and governmental P) should be unable to tell the exact amount of water in honey, after making a careful series of experiments—well, it rather jars us. How, then, shall poor we'uns believe they can tell the more abstruse percentages? Differences reported largely a difference of method, not a difference in the amount of water. We see. Our savants potter away for awhile by some method or other—and then guess the problem. Naturally, we practical folk think we can do our own guessing. When we go to the professors we go for a different article. All the same, we love Prof. Shutt. Honor to the man who says he failed to find out, when that was the case. Far better the doctor who says he don't know what's the matter with us than the one who looks enormously wise and says he knows all about our case, when he doesn't know a thing. But as they have been encroaching on my prerogative of guessing, I'll encroach on theirs and suggest a method. Try how many cubic inches of acetylene gas an ounce of honey will liberate, using honey instead of water, or say half honey and half water. When the amount of water in green wood is to be dealt with by practical folks it falls naturally into two parts: First, the water which can be got out by prolonged drying; and, second, the water which cannot be got out without disorganizing the wood. This second portion is, I understand, a quite large percentage of the whole weight of the wood. I begin to suspect that a similar non-get-outable increment of water in honey is large. Remember how alum, when it seems to be perfectly dry, will, nevertheless, when you heat it a little, dissolve in its own water and become a fluid. When we get around to complete statistics let's have the water in honey reported in two columns, "removable" and "non-removable" water. Page 72.

## Questions and Answers.

CONDUCTED BY

DR. C. O. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

### Transferring—Repetition of Questions.

We've took it—the bee-fever. Besides buying 3 colonies of bees, we got a barrel of bees; have ordered some hives, and when the proper time arrives we want to get the barrel-bees into a hive.

We're absolutely green as to the ins and outs of handling bees; have subscribed for the American Bee Journal, and read the whole of it—ads. and all—but as yet we have seen nothing regarding how we are going to get those bees transferred to a hive, or the proper time for tackling the job;



further, we expect to get the information from you, unless you'll come and do the trick for us. Come, now, give down, and get us out of this scrape. Will watch for reply.

IOWA.

ANSWER.—If I was to tell you in full in this department how to transfer bees, I'm afraid the Editor would tell me there wasn't room for it. You see, there are certain things so generally needed to be known by all bee-keepers that they are put together in a text-book, and if there were no such book, and each newcomer had to depend on finding in the journal the things that are contained in the text-book, it would take up a very large part of the journal. You might like that very well for this year, but next year and every year after, the same things would have to be told over and over again, and you'd get mad at the repetition, and want something fresh. In the same way, those who have been taking the Journal before you, would get mad, if space was taken up now with things easily found in a text-book. A good text-book will more than pay for itself by telling you what to do with those three colonies, to say nothing of the barrel. You'll have plenty of time to study it pretty thoroughly long before it's time to do any transferring, and after studying it if you find anything that needs further elucidation, send on a whole lot of questions and I'll take delight in answering them. That's what I'm here for.

### Sections Crosswise in the Super.

1. Can we produce as nice, and as much, honey in sections crosswise in the super as lengthwise? OHIO.

ANSWER.—Yes, if the hive is properly leveled.

### Feeding at Transferring Time—Keeping Queens.

I expect to transfer a colony from a box-hive to a Danz. hive, fixed with full sheets of foundation.

1. How much may I feed that will not overcrowd them while building comb to receive it?

2. In case a queen is sent me too soon can I keep her? If so, how, and for what length of time? PENNA.

ANSWERS.—1. That depends upon the bees gathering from the outside while they are drawing out the foundation. Don't think of setting them at it before it is late enough for bees to gather from the fields. If they are getting a fair yield of nectar there will be no need of feeding. If it is warm weather in the fall and they are getting nothing from the fields, you can feed 25 or 30 pounds of syrup without danger of overcrowding.

2. You can keep her in the cage a week, two weeks, or more, if the weather is warm, by merely seeing that there is always plenty of food and drink, and that the temperature shall not go below perhaps 80 degrees. Or, you can put the cage between the frames of a colony of bees, and there will generally be some good-natured bees that will feed her. I'm afraid, however, that you are thinking of getting a queen before the weather is warm. Don't.

### Hive to Start With—Bottom Starters in Sections—Wiring Frames—Stimulative Feeding.

1. I intend to start in bee-culture and run for comb honey. Which do you consider the best hive for that purpose? And what size?

2. Will it aid, in order to get nice, full sections of honey, to put a starter in the bottom of the section as well as the top? If so, how wide should the starters be?

3. Is it all right to wire brood-frames when only a 2-inch starter is used? Or does it pay to use full sheets of foundation?

4. Which is the best way to feed bees in the spring, to stimulate brood-rearing, in the open air or in feeders?

WISCONSIN.

ANSWERS.—1. I don't know. Bees will do well in almost any hive with proper management. It makes a difference to the bee-keeper, however, whether he has a hive that is easily handled. Perhaps the easiest way to tell you what I think in that regard is to say that in my own practice I am using dovetailed hives with Miller frames. My hives are 8-frame, but unless you give the bees very close attention I feel pretty sure 10-frame hives are better, and I have used both kinds by the hundred. (But don't understand that to mean more than three or four hundred.)

2. Yes, they are more certain to be filled down to the bottom. A good width for a bottom starter is  $\frac{3}{4}$  inch.

3. It is not worth while to wire frames with such a narrow starter. I believe it pays to use full sheets of foundation in brood frames, by which means you are sure of worker-comb, and your combs will be straight and just where you want them.

4. Probably one can be made to do as well as the other, but with open-air feeding you are not sure which colonies get the benefit, and you are not sure that your bees will not divide with those of your neighbors. Remember, however, that stimulative feeding in spring is a two-edged sword, and it is a safe thing for beginners not to meddle with it at all.

### The Queen's "Feelers."

Several times during my work among the bees and queens, I have noticed queens go through maneuvers that inclines me to believe that in a perfect queen the so-called stinger is a feeler that helps her to deposit her eggs so systematically. I would like to know your opinion as to whether this would be possible. I have had no queens sting me, and I have thought that those persons stung by queens happen to have imperfectly developed queens, more on the worker-bee order.

I could as honestly believe that the queen, in perfect development, has a feeler as to believe she has a stinger.

CALIFORNIA.

ANSWER.—There hardly seems to be any need of a feeler at both ends; for before a queen lays an egg in a cell she always explores it by thrusting her head into the cell, and unless she can see in the cell—and she can hardly see when she lays at night—it must be that she examines the cell by means of her "feelers" or antennae.

### Solar Wax-Extractor—Foundation-Fastener and Section-Folder.

1. How can I make a solar wax-extractor for melting combs?

2. How can I fasten full sheets of foundation in sections?

3. Send me a simple plan of a section-folder, that I can make myself. NEW YORK.

ANSWERS.—1. The essential thing is a box covered with glass, and it may be of any size, from a small box covered with an 8x10 pane of glass to a house large enough for your family to live in. Then there must be a surface on which to put the combs. This may be of perforated metal to allow the wax to pass through the perforations, or it may be without perforations, the surface slanting so the melted wax will run off. Under this a vessel to catch the wax.

2. If you have only a dozen to put in, you can use a patty-knife. Have the foundation warm enough to be tolerably soft, work in a warm room, and press the foundation hard into the wood. If you have them by the hundred, it may pay you to get a Parker foundation-fastener.

3. O, bless you! I couldn't do that. Don't know of any so simple but what you can buy them for a good deal less than you could make them. But if you think you can't afford to buy one, you can fold sections pretty well without any machine. But if you have a considerable number of sections to fold, I advise you to buy a machine.

**Our Wood Binder** (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of \$1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.

**Why Not Help a Little**—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.



### Bees Wintering Well.

Bees are wintering well so far, and I hope for a good season this year, although we had a good one last year. D. E. LANE.  
Washtenaw Co., Mich., Feb. 13.

### Spring Developing of Bees, Etc.

I have been much pleased of late, with many of the suggestions of bee-keepers in the American Bee Journal. Spring developing of bees I believe can be helped much by protecting the single-walled hives by some kind of cover from the cold, blowing winds, and sleety, rainy days of spring. Last spring I covered mine with blankets, oil-cloths, or anything I could get, and tied them on with twine, and I know it helped them very much. This spring I mean to get as much factory-cloth and boiled linseed oil and make a full cover for all hives, and cover all but the entrance.

Another little article I find very useful is a little scraper made of the section of a field-mower; pierce a hole in the center and rivet a  $\frac{1}{4}$  or  $\frac{3}{8}$  inch rod 10 inches long for a handle; it dresses up mussy frames and hives nicely.

Another thing I use for brushing bees off combs is a turkey-wing; it far excels all the brushes I have tried. R. MCCRADIE.  
North Dakota.

### Think Honey Made by Man.

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Van Buren Co., Iowa, Feb. 14.

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To the bee-keepers that are looking for a pretty, cheap and green (in season) shade, that can be planted in any desirable place around your house or lawn if there is soil, I wish to offer the following:

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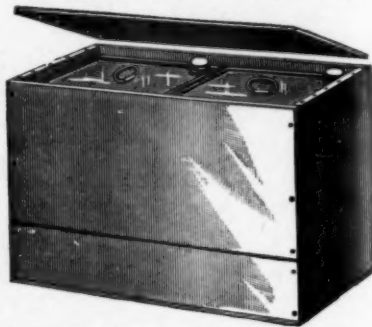
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We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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place every year, or whose hives must be moved in winter or early spring will have the same good shade, if the tubers are transplanted.

I am not a seed-merchant, nor have I colonies by the hundred, but I am a stock-raiser and farmer, and have bees. My hives are all the Simplicity, 16-frame (double hive) run for extracted. They rest on 8 pieces one foot apart, in straight rows facing east, and between each two hives in the center I plant artichokes, (the white French kind), and leave a path wide enough behind the hives to walk and work in; plant a solid row of artichokes (plant eyes about 10 inches apart). About extracting-time the artichokes between the hives and behind the hives will form very nearly two green walls, shading the hives from the south and west, and bees from other hives, and those hives in rows behind will not bother very much. Most of my bees are hybrids and blacks.

Those of you that have no shade for the bees, think of yourselves, if your house would get too hot in summer time and also too hot outside and no shade to go to. Try a few artichokes this summer; it will cost you only a few cents for each hive, and see how contented the bees will hunt up the shade; and the hive itself will be in pretty, green—and, last but not least, cheap—shade.

I would like to hear Mr. Hasty's opinion on this. **ALBERT WILTZ.**  
Atchison Co., Kans., Feb. 15.

**Fears Spring Losses of Bees.**

I have an interest in 5 bee-yards of 100 colonies each, but I could not keep bees without the American Bee Journal.

I am afraid we shall have heavy losses this spring, as the bees have not had a flight since Dec. 13.

We did not get any fall honey last season, and had to feed quite heavily, consequently they did not breed as late as they should have done. **ELMER E. TURNER.**

Tioga Co., Pa., Feb. 13.

**Bee-Keeping in the Yakima Valley.**

Perhaps a few remarks in regard to bee-keeping in Washington would be of interest to some of the readers of the American Bee Journal, especially to those who may be thinking of coming to this State with the view of engaging in bee-culture.

To one unacquainted with the conditions here in the Yakima Valley it would appear to be a bee-keepers' paradise, but, after two seasons' experience (as in the case of the writer), one may think differently.

In my experience I find the weather conditions to be one of the most, if not the most, serious drawbacks.

Bees winter in fine condition (as a rule) on the summer stands in single-wall hives, the only trouble being in the large consumption of stores on account of much mild weather.

In the spring there are some wild blossoms from which the bees gather pollen and some honey, then comes the fruit-bloom, and if the weather is favorable quite a large quantity of honey is gathered. Enough perhaps would be gathered to build up the colonies strong and have sufficient to last them through the long honey-drouth that lasts about two months or until the first bloom of alfalfa. But I find that even though there be an abundance of fruit and other bloom the bees are unable to do much on account of the weather conditions. There may be plenty of nectar in the flowers but our little workers would need the wings of a buzzard and a fur coat to enable them to carry on their work in the high, chilling winds.

Usually in the morning it is nice and warm; the bees rush out and begin rolling in the honey; everything looks favorable for a big day for the bees, but after an hour or two a heavy wind begins to blow from the west from off the snow-clad mountains of the Cascades, and there is no more honey-gathering that day. Last season that was the condition all through fruit-bloom; the bees consumed what stores were in the hives and barely gathered enough honey to keep them alive. After fruit-bloom for nearly two months they were actually in a starving condition. Many

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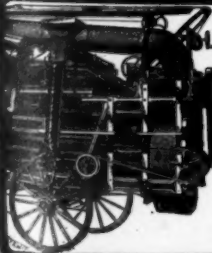
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colonies had to be fed to keep up their strength until the blooming of alfalfa.

During the first crop of alfalfa the weather conditions were but little better than during the first part of the season, but the bees gathered enough honey to build up strong and put them in good condition for the second crop, from which we get our main honey-flow. The cold winds ceased to blow and the weather was hot. The flow began July 4, and was so gradual and ended in the same way so that one hardly knows when it begins or where it ends. But it generally ends when the alfalfa is cut, but it is not all cut at once.

I secured from 75 colonies an average of 70 pounds of comb and extracted honey. If the weather conditions were favorable I have no doubt that twice or three times that amount could have been secured.

So far I have told only about the Yakima Valley as a bee-country, and there is much more to tell, but space will not permit. This article may put rather a discouraging aspect on bee-keeping in this Valley, but take it all in all bee-keeping has a bright future for the practical bee-keeper in the Yakima Valley.

No careless methods will do here. Only those who make a careful study of the conditions and seek for practical methods to overcome the difficulties can ever hope for success.

An effort is being made to organize, or re-organize, the Washington State Bee-Keepers' Association. I understand there was such an organization several years ago, but because of things not being harmonious it became a thing of the past. VIRGIL SIRE.

Yakima Co., Wash., Feb. 10.

## Wintering in an "Ideal Cellar."

I have just put my bees in what Mr. Root calls an "ideal cellar," and find the temperature 25 degrees, while in the open air it is 30 degrees. A fall of 10 degrees does not change the temperature much. Every hive is clean, and the dull, low hum, always heard when bees hibernate perfectly, seems about the same in all parts of the cellar. Very few bees flew out while I was sweeping up the dead, which has been about the same every month for the 3 months.

The air is sweet, and the prospect now is that they will go through the next 2 months successfully. T. F. BINGHAM.

Clare Co., Mich., Feb. 17.

## How the Bees are Wintering.

Bees in this locality have been confined to their hives for nearly 3 months, and being altogether wintered on their summer stands we are beginning to feel uneasy about their coming out in good condition in the spring. It being a nice day and the sun shining bright, but the bees not flying, and the thermometer registering only 28 degrees above zero, I thought I would take off the covers and give the sun a chance to dry off the cushion filled with cut rye-straw. I found the cushion frozen some to the cover, and very damp on top, but over the brood-chamber not the least sign of moisture, but warm and dry. After having removed two of the covers I came to the conclusion they would better be left alone until the bees take flight on a suitable day, and then give the cushion exposure to the sun.

With over 200 colonies in 4 yards my winter losses have never been over 5 percent. I find that meddling with the bees or their hive, when they are not flying, is very risky and detrimental to the colony.

I have just been reading in the February number of the Leipziger Bienen Zeitung, that the temperature in Germany has been mostly



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too moderate for the bees. Liedloff, one of the editors of that paper, does not approve of confining bees in the hive during the winter (practiced by some noted bee-keepers in Germany). Mr. Liedloff claims that the construction of the honey-bees is such that they can do without a cleansing flight for months, but must have a chance to leave the hive when the weather is favorable in winter.

I would like to add that I use the double-wall hive, dead-air space around the sides and bottom, with a cushion on the top only.

HERMAN COOK.

Wyoming Co., Pa., Feb. 17.

### King-Birds—Long-Tongue Bees.

My bees did fairly well last summer, averaging 98 pounds to the colony, mostly red clover honey. I think they would have done better only for losing quite a number of queens, which I found out happened by their being caught by the king-birds. I read an item in last week's Journal, that the few bees caught by king-birds did not amount to much, but I think it amounts to a great deal. I positively know that king-birds catch queens, for I was out one day with a shotgun watching for Mr. Bird, and just when the bird caught a bee, I let go, and when I picked it up I found in its bill a drone and queen hanging to it yet alive, only one wing being torn off by the shot. I took it back to the colony that swarmed, and put it at the entrance; there came about 20 bees going for her like they meant to pull her to pieces, but that was not their idea, for they pulled something away from her, and then everything was all right and the queen marched right in and the bees were as happy as could be. Since then I have no mercy for king-birds. I may be wrong, but I think they are not a bee-keeper's friend.

In regard to long-tongued queens, I can say a word. I think we should try to rear nothing but long-tongued bees. I have watched the bees on red clover. An Italian bee will alight and go from one nectar-tube to another on one blossom, and a black or hybrid bee will alight and fly from one blossom to another until they find the one with the short tube, then they will stick. That shows that the Italian bees can out-reach them.

P. H. HARBECK.

LaSalle Co., Ill., Feb. 12.



### Don't Spit in Your Hives.

Dr. A. W. Smyth says in the Irish Bee Journal:

"Woodhead states on the authority of Vignal that the *bacillus alvei* is an inhabitant of the human mouth—that great home of the bacteria where Leuwenhoek first discovered them. It is well, therefore, in working among bees to remember that human saliva can infect, and can start foul brood, and if the conditions are favorable to the bacteria, can destroy all the colonies in the apiary. A spark, if it can ignite the fire, is just as effectual as a torchlight.

### That Bogus Honey.

In your issue of December 12th, "Watson" in his Chicago Business Letter says that "law stops bogus honey." He tells us that "genuine honey has a brown coloring around the cells, while glucose honey is perfectly white." I have been keeping bees almost 20 years, and my bees have produced tons of perfectly white honey in that time, and I never saw a pound of glucose to my knowledge. Sometimes I neglect to take off my comb-honey as soon as I ought, and it becomes travel-stained or has a "brown coloring around the cells" and then I have to sell it for a less price.

While the item does not say so it gives the impression that a carload of comb honey was

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**A Fortune in a Name**—Under the keen and exacting conditions of modern business much more depends than formerly upon the name adopted for the business or the article offered for sale. We feel like congratulating the Clay Phelps Incubator Co., of Cincinnati, Ohio, who are advertising with us on the name "All Right," under which they are making and selling their incubators.

One or two points we wish to call attention to. One is the plan on which they sell their machines, namely, 10 days' trial. This is done to create the fullest possible confidence on the part of the public. If the manufacturer shows his own confidence in his goods, it's bound to find its answer in greater confidence on the part of the buyer. We do not remember to have seen in any catalog a clearer statement of the construction and advantages of an incubator than in the "All Right" catalog. A careful reading of these pages impresses one most favorably. In fact, it is hard to imagine how it would be possible to build a machine more conscientiously than the "All Right." The catalog is handsomely illustrated and is sure to interest and aid any one who is about to buy an incubator. Write the manufacturers to-day and get one of these books free. Address, Clay Phelps Incubator Co., Cincinnati, Ohio, and mention this paper.

## Send for circulars

regarding the oldest and most improved and original Bingham Bee-Smoker FOR 23 YEARS THE BEST ON EARTH.

25Atf T. F. BINGHAM, Farwell, Mich.

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**The Farmer Who Wins**  
on his crops is the farmer who plants the best seeds money can buy. I have some great new varieties of **Field Seed Novelties.** To introduce them will send the following big samples:  
Buckbee's Great Liberty Field Corn, very fine,  
Buckbee's Gt. W. Yellow Dent Corn, extra value,  
Buckbee's Illinois Oats, rich in nutrition,  
Buckbee's Bonanza Rape, an elegant variety,  
Buckbee's Electric Tree Beans, none better,  
Buckbee's Bromus Inermis, a great new grass,  
Buckbee's Viola Villosa, wonderful fodder.  
All for 10 cts. and my valuable Seed Guide Book for 1901. Established 25 years—only reliable seeds. Mention this paper and order to-day.  
**H. W. BUCKBEE,**  
Rockford Seed Farms,  
Dept. L-85, Rockford, Ill.

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## Wanted to Buy

20 to 50 Colonies of **BEES**, house and a few acres of land, in some good bee-locality—California, Washington, or Florida, preferred. State kind of hives, bees, and price. Address,  
T. J. B., box 78,  
10Atf RUTLEDGE, Pine Co., MINN.

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is needed to run the **Sure Hatch Incubator**. They are so simple that they run themselves. Made of California redwood, beautifully finished; twelve ounce copper tank, and hydron-safety lamp. Fully guaranteed. Our catalogue contains hundreds of photographs of the **Sure Hatch Incubator** at work, and valuable information. Sent free.

Sure Hatch Incubator Co., Clay Center, Neb., or Columbus, O.

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# Langstroth on... The Honey-Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for \$1.25, or club it with the American Bee Journal for one year—both for \$1.75; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with \$3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

**GEORGE W. YORK & CO.**

144 & 146 Erie Street, CHICAGO, ILL.

condemned in Chicago, because it was white, and contained from 50 to 60 percent of glucose. Without doubt extracted honey has been adulterated by unprincipled dealers, but I think there is some mistake about this item from Chicago and it will work an injury to beekeepers, who, as far as I know, are all in favor of the pure-food laws.—E. TARR, in the National Stockman and Farmer.

## "The Jouncer" for Freeing Extracting Supers of Bees.

One of the chief up-to-date appliances in my apiary is known as a jouncer. Some four or five years ago I described, with pen and pencil, my first jouncer, and it was a very crude affair compared with the one in use at present. The photos show the device and how to use it. It will be observed that it is made very strong, made mostly of tough fir, and put together with bolts, and a cloth tray is adjusted under the hive to be jounced.

When it is desired to jounce the bees from a super it is adjusted as in photo No. 1, and the whole jounced against the ground. The sudden jar, or a few of them, send the bees all into the tray. The latter can be removed as shown in Fig. No. 2, and the bees dumped on the top of the frames of the colony.

In order to cushion the lower ends of the corner posts of the jouncer they are chambered off to a point. As there are no stones in the apiary, when the jouncer strikes the ground the jounce is broken just enough to prevent the combs from breaking.

The benefits derived from this method of getting bees off the combs are all in the line of rapid manipulation. In the American Bee Journal not many months ago, Mr. Davenport caught on to this idea and applied it to the common Langstroth hive. The best success, however, is attained with a shallow brood-chamber; and the only objection I have to it is, when there is much thin honey it slops out



FIG. 1.—RAMBLER'S JOUNCER FOR CLEANING SUPERS.





FIG. 2.—RAMBLER'S JOUNCER AND HOW IT GETS THE BEES.

upon the bees; but, of course, it is best to wait until the honey is thick. It is hard to make people believe that any new way is better than their way; but as my former good seed sown brought forth some good results, I sow again, and again watch the results. Whether bee-keepers use the Rambler's jouncer or not, I hope the bee-keepers will discard the old, obsolete use of a brush. Bees can be shaken off the combs clean enough. In Central California but few brushes are used.

I have great hopes for the shallow extracting-super. Mr. Davenport says the jouncing principle is worth \$50 a year to him, even with the standard frames. Now, I would give \$50 for a method that will enable me to extract a whole shallow super without removing the frames. Can it ever be done?—RAMBLER, in Gleanings in Bee-Culture.

#### Keeping a Record.

Considerable has been written in the past on the subject of keeping records of each colony of bees. Dr. Miller and Roots have had several arguments in which the Doctor was in favor of a book record and the Roots preferred the little slates, but years of experience have taught me that they do not completely answer the purpose for which they are intended. By

using abbreviations we can keep a record on these extending through a few months or even one season, but of what use is this as a record? Of course, they are convenient in keeping a temporary record, but a record of a colony in order to be of value should extend through a number of years, for how are we to know what colonies (or the strain of bees from which queen) have averaged the best through a number of years? We can not trust this to memory. If we could, records would be useless.

I now keep a book record, and said records run from year to year so that I can trace the ancestry of any queen in the apiary back to the time when this record commenced.—S. E. MILLER, in the Progressive Bee-Keeper.

#### Every Chicken Man Needs a green bone cutter.

### The Adam

alone is ball bearing, it cleans itself, it cannot become clogged or choked, it is fed at the pleasure of the operator. You will want to know of it. Send for our Illustrated Catalogue No. 9, before you buy. Sent Free.

W. J. ADAM, Joliet, Ills.

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That covers the whole Apicultural Field more completely than any other published, send \$1.25 to

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Everything used by bee-keepers. POWDER'S HONEY-JARS. Prompt service. Low Freight Rates. NEW-CATALOG FREE.

WALTER S. POWDER.

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## HONEY AND BEESWAX

### MARKET QUOTATIONS.

CHICAGO, Feb. 18.—There has been a decline in the market on comb honey of one cent per pound since the month came in. Best grades of white now slow at 14c; sales chiefly at 13½c with some Western choice at 13c; no buckwheat comb offered, and other dark grades are meeting with little attention, prices ranging from 9@12c. Extracted is steady, white, 5½@7c, according to quality and what it is gathered from; amber, 5¼@5½c; off grades at 5c. Beeswax wanted at 30c. R. A. BURNETT & Co.

ALBANY, N. Y., Feb. 21.—Our market has not been so empty of comb honey in a long time. Fancy white comb, 15@16c; No. 1, 15c; dark and buckwheat, 13@14c. Extracted, buckwheat, 6c. Beeswax, 30c. H. R. WRIGHT.

CINCINNATI, Feb. 7.—The honey market has been rather dull this year. Comb honey is selling fairly, and brings as follows: White clover, 15c; lower grades from 12½@14c. Extracted honey sells very slow, the lower grades bringing 5@6c, and fancy, 6¼@7¼c. Beeswax, 28@30c. C. H. W. WEBER.

BOSTON, Jan. 20.—Strictly fancy comb honey in cartons, 15½c; A No. 1, 15c; No. 1, 14½c; very little No. 2 to offer; stock nominally running No. 1 and A No. 1. Extracted, light amber, 7½c; amber, 7c; Florida honey, 6¼@7c.

Our market continues somewhat dull in the demand for honey, while stocks are ample for the balance of the season, unless there should be a much larger demand than we at this moment anticipate. BLAKE, SCOTT & LEE.

NEW YORK, Feb. 8.—There has been very little movement of late in comb honey, and while there is no buckwheat on the market to amount to anything, there is sufficient quantity of the different grades of white honey. The demand having been slow of late, prices have had a downward tendency and are likely to remain so during the spring.

We quote: Fancy white, 14c, and exceptionally fine stock at perhaps 15c; No. 1 white at 13c; amber at 11@12c. Extracted remains dull at unchanged prices. Arrivals of late are quite plentiful of all the different grades. Beeswax firm at 28@28½c. HILDETH & SEGELKEN.

SAN FRANCISCO, Feb. 12.—White comb, 11@12½ cents; amber, 8@10c; dark, 6@7 cents. Extracted, white, 5½@6c; light amber, 4¼@5c; amber, 4@— Beeswax, good to choice, light, 26@28c; dark, 24@25c.

Considering the limited quantities offering there is a fair trade in progress, both for shipment and local account. Quotable values are without change, but market is moderately firm at the prevailing figures.

**WANTED. EXTRACTED HONEY**—either large or small lots; parties having same to offer, send samples, and best prices delivered at Cincinnati, Ohio. We pay cash on delivery. THE FRED W. MUTH CO., 104½ Front and Walnut Sts., CINCINNATI, O.

Please mention Bee Journal when writing.

### Astonished the Editor.

We advertised our Rural Free Delivery Box in the "Country Gentleman" of Albany, N. Y. They ordered a box "for use in the office." Here is what they say of it:

"We had no idea, till we examined for ourselves, of the immense return that this company makes for the petty sum they charge, \$2.00, transportation prepaid. There is positively no excuse for using anything else on a rural route."

Of course we don't want all the business, but there is "room for a few more." Write us.

BOND STEEL POST CO., ADRIAN, MICH.

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#### BETTER THAN SPRAYING.

Don't lug barrels of water around when spraying. Use the poison direct. Our

### Common Sense Dust Sprayer

and Insect Exterminator is a most ingenious device that is rapidly supplanting the old methods. It blows the finely powdered dust into every nook and crevice. Reaches the bottom as well as the tops of leaves. Destroys insect life on plants, vines, shrubs and trees. Just as effective for vermin on poultry and pigs. More rapid than spraying. Descriptive circulars and testimonials free. HILLIS DUST SPRAYER CO., Box 14, ST. JOSEPH, MO.

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We have a Large Stock on hand  
and can ship promptly.

SEND US YOUR ORDERS FOR  
**Hives, Extractors**

OR ANYTHING YOU WANT IN THE  
BEE-KEEPING LINE.

**WE MAKE ONLY THE BEST.**

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

**THE W. T. FALGONER MFG. CO.,**  
JAMESTOWN, N. Y.

W. M. GERRISH, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

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**WANTED A Competent and Reliable APIARIST**

to handle two out-apiaries on shares. Must have experience, and be well posted in the business. Address,

**P. W. DUNNE,**  
River Forest, Oak Park Post-Office,  
Cook Co., Ill.

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**Tip-Top Glass Honey-Jars**



The picture shown herewith represents the best one-pound jar for honey that we know of. It is made of the clearest flint glass, and when filled with honey, and a neat label attached, it makes as handsome a package as can be imagined. Its glass top sets on a flat rubber ring, and is held in place by a flat steel spring across the top as shown in the picture. It is practically air-tight, thus permitting no leak,

which is an important thing with honey-sellers.

We can furnish these jars, f.o.b. Chicago, at these prices: One gross, \$5.00; two gross, \$4.75 a gross; five or more gross \$4.50 per gross.

If you try them once you will likely use no other kind of top or sealing arrangement for honey jars.

**GEORGE W. YORK & CO.**  
144 & 146 Erie Street, CHICAGO, ILL.

**1902—Bee-Keepers' Supplies!**

We can furnish you with The A. I. Root Co's goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market price paid for beeswax. Send for our 1902 catalog. M. H. HUNT & SON, Bell Branch, Wayne Co., Mich.

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**Dittmer's Foundation!**

Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make it the BEST and MOST desirable in all respects. My PROCESS and AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and

**Work Wax Into Foundation For Cash**

at prices that are the lowest. Catalog giving

**Full Line of Supplies,**

with prices and samples, free on application BEESWAX WANTED.

**GUS. DITTMER, Augusta, Wis.**

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25th Year **Dadant's Foundation** 25th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 24 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

**Bee-Keepers' Supplies** OF ALL KINDS \*\*\*\*\*

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

**Langstroth on the Honey-Bee—Revised,**  
The classic in Bee-Culture—Price, \$1.25, by mail.

BEESWAX wanted  
at all times....

**CHAS. DADANT & SON,**  
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**Do You Produce Comb Honey?**

Here is something that will interest you.

"The Danzenbaker Hive I think will take precedence over all others. I am delighted with it, as it is simple, and easily manipulated."

R. H. PEPPWORTH,  
Pietermaritzburg, Natal, South Africa.  
Nov. 30, 1901.

If you buy the Danz. hive you will find a ready market for your honey. Comb honey in Danz. sections has never yet been held because of "little demand."

**EXTRACTED HONEY!**

You will need good hives, smokers, knives, and most of all, a good honey-extractor. Root's Cowan Rapid Reversible Extractors are used everywhere, and always acknowledged to be the best. Be sure to get one of our make.

**BEESWAX?**

You should have the best wax-extractors, else large quantities of wax will be left in the refuse. See what one extensive and practical bee-keeper says of the ROOT-GERMAN STEAM WAX-PRESS:

For over 20 years past I have had to render up old bombs or cappings in larger or smaller quantities, and my experience has been extensive, for I have tried faithfully almost every known method to get all the wax out, but have never succeeded to my satisfaction until recently. I got of you a German wax-press, that comes nearer accomplishing that object than any thing I have ever tried. I am more than satisfied with it, for, if used according to directions, there is little if any wax left in the refuse. Any one used to the old methods will be astonished at the results obtained. In this press you have given those in need of it the best thing, to my mind, you have ever brought out, and I really believe all who try it will pronounce it a real treasure. There are other points of advantage that I could mention, one of which is its perfect safety—no boiling over and setting fire to every thing, and it can be left alone without care for quite a time, and every thing can be kept neat and clean, and it occupies very little room.  
E. T. FLANAGAN.  
Belleville, Ill., Dec. 12.

Root's goods are for sale everywhere. See list of jobbers and agents in the January bee-journals. A full list of local agents sent you on request. We will also send you a little book, "Facts About Bees," describing the Danz. hive, and our catalog, on request.

**WANTED.**—Beeswax. Price, 28c cash or 30c in trade for pure average beeswax, delivered here. We want also a car of white sage extracted honey, also large lots of WHITE COMB HONEY in DANZ. sections.

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